

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A method for allocating computer system
2 resources between concurrently executing workloads, comprising:
3 establishing a first resource pool that specifies requirements for each of a
4 plurality of different computer system resources, wherein the plurality of different
5 computer system resources are components of a single computer system, and
6 wherein establishing the first resource pool involves establishing minimum and
7 maximum requirements for a given resource;
8 allocating the plurality of different computer system resources to one or
9 more resource pools, including the first resource pool, to create a resource
10 allocation, wherein requirements of the first resource pool are satisfied, wherein
11 prior to allocating the plurality of different computer system resources, the method
12 further comprises:
13 verifying that collective requirements of the one or more
14 resource pools can be satisfied, and
15 if the collective requirements cannot be satisfied, signaling
16 an error condition; and
17 wherein resources allocated to the first resource pool can change over
18 time; and
19 binding a first process to the first resource pool, so that the first process
20 has access to the plurality of different computer system resources allocated to the
21 first resource pool.

1 2. (Original) The method of claim 1, wherein allocating the plurality of
2 different computer system resources to one or more resource pools involves:
3 partitioning each of the plurality of different computer system resources
4 into one or more partitions, wherein a first partition is associated with a first
5 resource and a second partition is associated with a second resource;
6 allocating the first partition to a single resource pool, so that only
7 processes associated with the single resource pool can access the first partition;
8 and
9 allocating the second partition to multiple resource pools so that processes
10 associated with the multiple resource pools can share the second partition.

1 3 (Canceled).

1 4. (Original) The method of claim 1, wherein establishing the first
2 resource pool involves selecting a file containing a representation of the first
3 resource pool from a plurality of possible files.

1 5. (Original) The method of claim 1, further comprising storing a
2 representation of the resource allocation to non-volatile storage so that the
3 resource allocation can be reused after a machine failure.

1 6. (Original) The method of claim 5, wherein storing the representation of
2 the resource allocation involves storing a representation of each of the one or
3 more resource pools along with associated resources.

1 7. (Original) The method of claim 5, wherein storing the representation of
2 the resource allocation involves storing an Extensible Markup Language (XML)
3 representation of the resource allocation.

1 8. (Original) The method of claim 1,
2 wherein the first resource pool is associated with a first project; and
3 wherein the first process is one of a plurality of processes associated with
4 the first project.

1 9 (Canceled).

1 10. (Original) The method of claim 1, further comprising dynamically
2 adjusting the resource allocation during system execution.

1 11. (Original) The method of claim 1, wherein the plurality of different
2 computer system resources can include:
3 central processing units;
4 semiconductor memory;
5 swap space; and
6 networking resources.

1 12. (Currently amended) A computer-readable storage medium storing
2 instructions that when executed by a computer cause the computer to perform a
3 method for allocating computer system resources between concurrently executing
4 workloads, the method comprising:
5 establishing a first resource pool that specifies requirements for each of a
6 plurality of different computer system resources, wherein the plurality of different
7 computer system resources are components of a single computer system, and
8 wherein establishing the first resource pool involves establishing minimum and
9 maximum requirements for a given resource;
10 allocating the plurality of different computer system resources to one or
11 more resource pools, including the first resource pool, to create a resource

12 allocation, wherein requirements of the first resource pool are satisfied, wherein
13 prior to allocating the plurality of different computer system resources, the method
14 further comprises:
15 verifying that collective requirements of the one or more
16 resource pools can be satisfied, and
17 if the collective requirements cannot be satisfied, signaling
18 an error condition; and
19 wherein resources allocated to the first resource pool can change over
20 time; and
21 binding a first process to the first resource pool, so that the first process
22 has access to the plurality of different computer system resources allocated to the
23 first resource pool.

1 13. (Original) The computer-readable storage medium of claim 12,
2 wherein allocating the plurality of different computer system resources to one or
3 more resource pools involves:
4 partitioning each of the plurality of different computer system resources
5 into one or more partitions, wherein a first partition is associated with a first
6 resource and a second partition is associated with a second resource;
7 allocating the first partition to a single resource pool, so that only
8 processes associated with the single resource pool can access the first partition;
9 and
10 allocating the second partition to multiple resource pools so that processes
11 associated with the multiple resource pools can share the second partition.

1 14 (Canceled).

1 15. (Original) The computer-readable storage medium of claim 12,
2 wherein establishing the first resource pool involves selecting a file containing a
3 representation of the first resource pool from a plurality of possible files.

1 16. (Original) The computer-readable storage medium of claim 12,
2 wherein the method further comprises storing a representation of the resource
3 allocation to non-volatile storage so that the resource allocation can be reused
4 after a machine failure.

1 17. (Original) The computer-readable storage medium of claim 16,
2 wherein storing the representation of the resource allocation involves storing a
3 representation of each of the one or more resource pools along with associated
4 resources.

1 18. (Original) The computer-readable storage medium of claim 16,
2 wherein storing the representation of the resource allocation involves storing an
3 Extensible Markup Language (XML) representation of the resource allocation.

1 19. (Original) The computer-readable storage medium of claim 12,
2 wherein the first resource pool is associated with a first project; and
3 wherein the first process is one of a plurality of processes associated with
4 the first project.

1 20 (Canceled).

1 21. (Original) The computer-readable storage medium of claim 12,
2 wherein the method further comprises dynamically adjusting the resource
3 allocation during system execution.

1 22. (Original) The computer-readable storage medium of claim 12,
2 wherein the plurality of different computer system resources can include:
3 central processing units;
4 semiconductor memory;
5 swap space; and
6 networking resources.

1 23. (Currently amended) An apparatus that allocates computer system
2 resources between concurrently executing workloads, comprising:
3 an establishment mechanism that is configured to establish a first resource
4 pool that specifies requirements for each of a plurality of different computer
5 system resources, wherein the plurality of different computer system resources are
6 components of a single computer system, and wherein the establishment
7 mechanism is configured to establish minimum and maximum requirements for a
8 given resource;
9 an allocation mechanism that is configured to allocate the plurality of
10 different computer system resources to one or more resource pools, including the
11 first resource pool, to create a resource allocation, wherein requirements of the
12 first resource pool are satisfied, and wherein resources allocated to the first
13 resource pool can change over time;
14 a verification mechanism that is configured to verify that collective
15 requirements of the one or more resource pools can be satisfied;
16 wherein if the collective requirements cannot be satisfied, the verification
17 mechanism is configured to signal an error condition; and
18 a binding mechanism that is configured to bind a first process to the first
19 resource pool, so that the first process has access to the plurality of different
20 computer system resources allocated to the first resource pool.

1 24. (Original) The apparatus of claim 23, wherein the allocation
2 mechanism is configured to:
3 partition each of the plurality of different computer system resources into
4 one or more partitions, wherein a first partition is associated with a first resource
5 and a second partition is associated with a second resource;
6 allocate the first partition to a single resource pool, so that only processes
7 associated with the single resource pool can access the first partition; and to
8 allocate the second partition to multiple resource pools so that processes
9 associated with the multiple resource pools can share the second partition.

1 25 (Canceled).

1 26. (Original) The apparatus of claim 23, wherein the establishment
2 mechanism is configured to select a file containing a representation of the first
3 resource pool from a plurality of possible files.

1 27. (Original) The apparatus of claim 23, further comprising an archiving
2 mechanism that is configured to store a representation of the resource allocation to
3 non-volatile storage so that the resource allocation can be reused after a machine
4 failure.

1 28. (Original) The apparatus of claim 27, wherein the archiving
2 mechanism is configured to store a representation of each of the one or more
3 resource pools along with associated resources.

1 29. (Original) The apparatus of claim 27, wherein the archiving
2 mechanism is configured to store an Extensible Markup Language (XML)
3 representation of the resource allocation.

1 30. (Original) The apparatus of claim 23,
2 wherein the first resource pool is associated with a first project; and
3 wherein the first process is one of a plurality of processes associated with
4 the first project.

1 31 (Canceled).

1 32. (Original) The apparatus of claim 23, further comprising an adjustment
2 mechanism that is configured to dynamically adjust the resource allocation during
3 system execution.

1 33. (Original) The apparatus of claim 23, wherein the plurality of different
2 computer system resources can include:
3 central processing units;
4 semiconductor memory;
5 swap space; and
6 networking resources.